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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,862	08/18/2000	HIDEYUKI KURITA	107082	7197

25944 7590 04/23/2002

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 04/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,862

Applicant(s)

KURITA ET AL.

Examiner

Ishwar B Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 13, 2002, paper No. 7.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 13 February 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of group II, claims 14-17, in Paper No. 7, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Odaira et al., US Patent No. 5,600,103, hereafter referred to as Odaira.

Regarding claim 14, Odaira discloses a flexible wiring board comprising:

a plurality of patterned metal films with a resin film being interposed there between among which adjacent two patterned metal films are electrically connected to

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each other via bumps (copper pattern 3 and 3' with bump 2' and resin film 4', see figure 5a-5b, embodiment 2, column 10, line 60 to column 12, line 8).

Though Odaira does not explicitly disclose the resin film is cured after said bumps are pressed against the top surface of said resin film, Odaira does disclose laminating the patterned layers with pressure and heating. Further, how the product is made does not distinguish it from the prior art if the final product is same. Any known method can be used to laminate the patterned layer and connecting them electrically. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit board of Odaira either with curing the resin after the said bumps are pressed against the top surface of resin film or any other known method in the art in order to have reliable lamination and electrical connection between two patterned layer, since it has been held that the process limitation in the product claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens* 145 USPQ 656 (CCPA 1965).

Regarding claim 15, Odaira further discloses the partial exposure of the resin film between the patterned layers (see figure 5a-5b).

Regarding claim 16 and 17, the applicant is claiming the said two adjacent metal films connected via said bumps are ultrasonically bonded to said bumps. Though

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Odaira does not disclose the ultrasonic bonding of the bumps, the ultrasonic bonding is generally known in the art and used for bonding two conductors and further there other methods known in the art for connecting the conductor such as plated via, or connection with conductive adhesive etc. However, these are structural claims and how they are made do not have patentable weight. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit board of Odaira either with ultrasonically bonding the said bumps or any other known method in the art in order to have reliable electrical connection between two patterned layer, since it has been held that the process limitation in the product claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. *In re Stephens* 145 USPQ 656 (CCPA 1965).

Response to Arguments

5. Applicant's arguments filed on February 13, 2002 have been fully considered but they are not persuasive. The applicant's argument about the way the resin is cured is not persuasive as this is a product claim and how the product is made does not distinguish it from the prior art. Further, the embodiment as disclosed in figure 5a and 5b of Odaira is now showing the patterned films 3 and 3' with exposed resin layer and the resin layer will be exposed during the application of pressure and heat during the lamination.

Conclusion

6. Applicant's amendment necessitated the other embodiment of the prior art of Odaira to be used for the rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar B Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
April 15, 2002



KAMAND CUNEO
PRIMARY EXAMINER